

INFLAMED AMYAND'S HERNIA - RARE IN OBSTRUCTED INGUINAL HERNIA

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ABSTRACT

Amyand's hernia, defined as an inguinal hernia with appendix as the content of hernial sac, is a exceedingly rare disease, reported in 1% of cases of inguinal hernia repair. The appendix can be normal or inflamed and acute appendicitis is seen in 0.13% of cases. Obstructed inguinal hernia is a commonly encountered surgical emergency whereas appendix as a content of the hernia sac is not so common.. Here we report a 60 year old male presenting to the surgical emergency with features of obstructed right inguinal hernia. The patient was taken up for emergency surgery - intra operatively-the sac was opened and found to contain the caecum with inflamed appendix. Appendicectomy and herniorrhaphy was done. Post operative period was uneventful. The case is being presented for its rarity.

Keywords: *Appendix, Obstructed Hernia, Amyand's, Appendicectomy*

INTRODUCTION

Amyand's hernia, defined as an inguinal hernia with appendix as the content of hernial sac, is a exceedingly rare disease, reported in 1% of cases of inguinal hernia repair. The appendix can be normal or inflamed and acute appendicitis is seen in 0.13% of cases. It is most commonly found intra-operatively during a right-sided inguinal hernia repair (Amyand, 1736). It was first reported by Amyand (1660-1740), a French surgeon working at St George's and Westminster hospitals in London. He performed the first successful appendectomy in 1735, on an 11-year-old boy who presented with an inflamed, perforated appendix in his inguinal hernia. The case was published in the Philosophical Transactions of the Royal Society of London (Livaditi *et al.*, 2007).

CASES

A 60 year-old male came to Emergency ward with the complaints of irreducible right side groin swelling since three hours duration associated with colicky type of pain noted in the right groin of same duration. He had right groin swelling for about two years for which he did not receive any treatment. There was a history of not passing stools of one day but he passed flatus just three hours back. He was a known bronchial asthma patient on regular treatment. On local examination of right groin revealed a tense, tender, irreducible 15x10 cms sized inguinoscrotal swelling with redness noted in the skin over the swelling with out any cough impulse. The bowel sounds were sluggish in nature. Left inguinal region and left scrotum were clinically normal. All basic investigations and chest and abdominal erect x ray were normal. After adequate rehydration and 16 sized Foleys catheter insertion we took up for emergency right inguinoscrotal exploration and repair under regional anaesthesia. Through right inguinoscrotal incision skin, subcutaneous layers, external oblique aponeurosis incised. Thereby right inguinal canal opened and cord structures were separated from the hernia sac. The following intraoperative findings as soon as opened the sac. Contents: 1) about 200ml of sero- sanguineous fluid let out 2) dilated small bowel loops, partly congested but viable 3) Appendix - inflamed at its tip (Figure 1.1). So we did the Appendicectomy after ligation and division of the mesoappendix followed by Caecum and bowel loops were examined found to be viable that was reduced inside of the abdomen. The posterior wall strengthening was done by Modified Bassini's repair. After perfect hemostasis wound was closed in layers. Dressing done with scrotal bandage. The appendix specimen sends to histopathological examination. The post operative period was uneventful and discharged on sixth postoperative day (Figure 1.2).

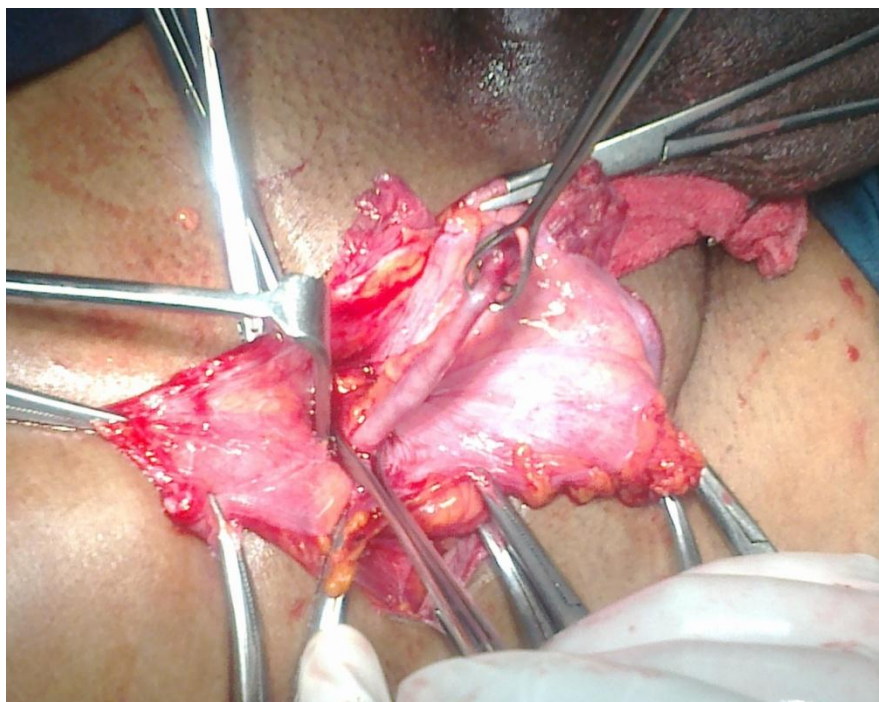


Figure 1.1: Shows the inflamed appendix with in the hernia sac

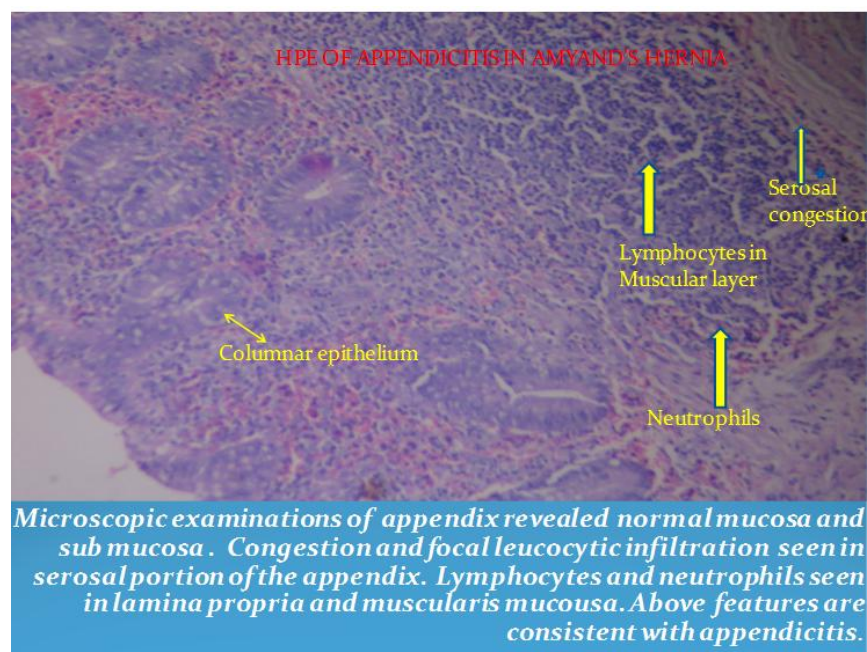


Figure 1.2: Shows HPE of Acute Appendicitis

DISCUSSION

Amyand was a French born English Surgeon who in 1735 successfully performed and recorded the repair of an inguinal hernia in an 11-year-old patient. The patient was found to have the vermiform appendix in his hernia sac. Since then, the presence of the vermiform appendix in a hernia sac has been deemed an 'Amyand's hernia' (Livaditi *et al.*, 2007). The incidence of an Amyand's Hernia is ~1% of inguinal hernias occurring most often in male patients. They are most commonly located on the right side due to

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the location of the appendix. The appendix has also been found in obturator, umbilical and incisional hernias (Amyand, 1736). Of inguinal hernias, only 0.1% has an inflamed appendix (Losanoff and Basson, 2007). This is a result of either primary inflammation of the appendix causing edema of the internal inguinal ring or incarceration of a normal appendix by abdominal wall musculature (Amyand, 1736). As in our patient, most Amyand's hernia's are discovered intra-operatively. However, pre-operative diagnosis can be made using CT with oral contrast, in patients with suspicion of appendicitis. When scrotal involvement is suspected ultrasound is a low cost alternative without radiation (Amyand, 1736).

Losanoff and Basson created a classification scale to identify and treat Amyand's hernias (Table 1) (Losanoff and Basson, 2008; Llullaku *et al.*, 2010). A Type 1 hernia has a normal appendix in an inguinal hernia, which is managed with a reduction and mesh repair. Types 2–4 have acute appendicitis within an inguinal hernia sac. Type 2 has an inflamed nonperforated appendix. Type 3 has a perforated appendix and type 4 is complicated with intra-abdominal pathology.

Type 2–4 hernias are managed with appendectomy and primary repair (without mesh). In addition, to the primary repair and appendectomy, type 3 includes a laparotomy for abdominal irrigation, possible orchiectomy or colectomy and type 4 includes investigation of pathology (Losanoff and Basson, 2008; Llullaku *et al.*, 2010).

Table 1: Losanoff and Basson classification of Amyand's hernia (Losanoff and Basson, 2008; Llullaku *et al.*, 2010; Sharma *et al.*, 2007)

Classification	Description	Surgical management
Type 1	Normal appendix in an inguinal hernia	Hernia reduction, mesh repair
Type 2	Acute appendicitis in an inguinal hernia, without abdominal sepsis	Appendectomy, primary repair of hernia without mesh
Type 3	Acute appendicitis in an inguinal hernia, with abdominal wall or peritoneal sepsis	Laparotomy, appendectomy, primary repair without mesh
Type 4	Acute appendicitis in an inguinal hernia, with abdominal pathology	Manage as Type 1–3, investigate pathology as needed

Our patient had a Type 2 Amyand's hernia and underwent anatomic repair with an appendectomy. In the pediatric population, however, a prophylactic appendectomy would have been performed (without mesh repair), because children and adolescents have a higher risk of acquiring acute appendicitis (Losanoff and Basson, 2008; Llullaku *et al.*, 2010).

Conclusion

Hernia is one of the most common operations done by general surgeons, however it is known to throw challenges even for experienced surgeons. Amyand's hernia is a rare clinical entity which is difficult to diagnose preoperatively. In each case of Amyand's hernia, the treatment has to be individualized depending upon the findings and our case report highlights the same.

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